Please print or type in the unshaded areas only (fill-in areas are spaced for elite type, i.e. 12 character/inch).

A. PROCESS

DOE/RL-88-21 Thermal Treatment Test Facilities Rev. 0, 5/19/88

FORM 3	DA	EPA/STATE I.D. NUMBER / A 7 8 9 0 0 0 8 9 6 7						
FOR OFFICIAL	USE ONLY							
APPLICATION APPROVED	DATE RECEIV (mo., day, & y			COMMENTS				
				CLOSED 05/1	3/96			
II. FIRST OR R	EVISED APPLICA	TION						
application. If the			below (mark one box only) to indicate whe d you already know your facility's EPA/STA					
A. FIRST APPLICATION (place an "X" below and provide the appropriate date) (See instructions for definition of "existing" facility. Complete Item below.) DAY YEAR 01 01 1978 *FOR EXISTING FACILITIES, PROVIDE THE DATE (mo., day, & yr.) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED (use DATE (mo., day, & yr.) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED (use								
			the boxes to the left) *The date construction of the Hanford Fac commenced.	ility				
	PPLICATION (plac CILITY HAS AN IN		elow and complete Section I above) CATUS PERMIT 2. FA	CILITY HAS A FINAL PERM	ИΙΤ			
III. PROCESS	- CODES AND CA	PACITIES						
codes. If m process (in	ore lines are neede cluding its design c	ed, enter th capacity) in	the list of process codes below that best of e code(s) in the space provided. If a proce the space provided on the (Section III-C).	ss will be used that is not in				
B. PROCESS	DESIGN CAPACIT	TY - For ea	ach code entered in column A enter the cap	pacity of the process.				
1. AMOUN	IT - Enter the amoເ	ınt.						
			unt entered in column B(1), enter the code ed below should be used.	from the list of unit measure	e codes below that	t describes the unit of measure used.		
P	ROCESS	PRO- CESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY	PROCESS	PRO- CESS CODE	MEASURE FOR PROCESS		
Storage:				Treatment:				
CONTAINEF TANK WASTE PILI	R (barrel, drum, etc. ≣) S01 S02 S03	GALLONS OR LITERS GALLONS OR LITERS CUBIC YARDS OR CUBIC METERS	TANK SURFACE IMPOUNDME	T01 ENT T02	GALLONS PER DAY OR LITERS PER DAY GALLONS PER DAY OR LITERS PER DAY		
SURFACE II	MPOUNDMENT	S04	GALLONS OR LITERS	INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER		
Disposal:						HOUR; GALLONS PER HOUR OR LITERS PER		
INJECTION LANDFILL	WELL	D80 D81	GALLONS OR LITERS ACRE-FEET (the volume that would cover one acre to a depth of one foot) OR HECTARE-METER	OTHER (Use for physica chemical, thermal or biol treatment processes not		HOUR GALLONS PER DAY OR LITERS PER DAY		
LAND APPL OCEAN DIS		D82 D83	ACRES OR HECTARES GALLONS PER DAY OR	occurring in tanks, surfactimpoundments or inciner	ators.			
SURFACE II	MPOUNDMENT	D84	LITERS PER DAY GALLONS OR LITERS	Describe the processes i space provided: Section				
UNIT OF ME	MEA	IIT OF ASURE ODE	UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASU	UNIT OF MEASURE JRE CODE		
GALLONS LITERS CUBIC YAR CUBIC MET GALLONS F	ERS	G L Y C U	LITERS PER DAY TONS PER HOUR METRIC TONS PER HOUR GALLONS PER HOUR LITERS PER HOUR	V D W E H	ACRE-FEET HECTARE-MET ACRES HECTARES	A F B Q		
			TING SECTION III (shown in line numbers ne other can hold 400 gallons. The facility a					

B. PROCESS DESIGN CAPACITY

LINE NUMBER	CODE (from list above)	1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY			SE				
X-1	S02	600	G								
X-2	T03	20	E								
1	T04	17,000 (max)	U								
	0 u (annual avg) s permit covers several treatment technologies/test facilities based upon guidance received from EPA and WDOE in February, 1988.										
2											
3											
4											
5											
6											
7											
8											
9											
10											

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (CODE "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

T04

This permit application covers treatment of radioactive mixed waste (RMW) and hazardous wastes via various thermal treatment R&D processes. The primary thermal treatment (non-incineration) processes are In Situ Vitrification (ISV) and waste vitrification.

ISV is a thermal treatment process that converts contaminated soils and sludges into a glass and crystalline product. An electrical current is passed amoung an array of four electrodes imbedded in the contaminated soil or sludge, melting and glassifying it. The process continues outward and downward until the appropriate vitrification depth is obtained. RMW and dangerous waste constituents are stabalized in the glass and crystalline product. Organic contaminants are destroyed by pyrolysis, and the pyrolysis products oxidize as they migrate to the surface. PNL currently operates four treatability test units (bench-, engineering-, pilot-, and large-scale). The engineering- and bench-scale units are located in the 324 Building in the 300 Area on the Hanford Site. The pilot- and large-scale units are transportable within the Hanford Site. The design capacity of the units vary from 5 gallons per day (bench-scale) to 17,000 gallons per day (large-scale).

Waste vitrification prototype equipment is located in the 324 Building. Treatability studies are performed using simulated and actual RMW samples. RMW is mixed with glass-forming materials and vitrified into a highly durable glass for disposal. The design capacity ranges from 1.5 gallons per day (bench-scale) to 30 gallons per day (pilot -scale).

In some treatability studies with ISV, vitrified soil is left in place for additional study before either being removed or designated as nonhazardous.

Other thermal treatment processes covered by this permit include plasma arc pyrolysis, in situ heating of soils and sludges for removal of organics, metal melting for volume reduction and immobilization of contaminated metals, gamma induced oxidation of organic chemicals, thermal treatment for the drying and decomposition of liquid slurries, in can melting of soil wastes and liquid slurries, and microwave heating to dry and immobilize liquid and solid wastes.

IV. DESCRIPTION OF DANGEROUS WASTES

- A. DANGEROUS WASTE NUMBER Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describe the characteristics and/or the toxic contaminants of those dangerous wastes
- B. ESTIMATED ANNUAL QUANTITY For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.
- C. UNIT OF MEASURE For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

 ENGLISH UNIT OF MEASURE CODE

 METRIC UNIT OF MEASURE CODE

POUNDS P KILOGRAMS K
TONS T METRIC TONS M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

- 1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
- 2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "Included with above" and make no other entries on that line.
- 3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV (shown in line numbers X-1, X-2, X-3, and X-4 below) - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

L	A. DANGEROUS		C. UNIT					D. PROCESSES
I N NO E .	WASTE NO.	B. ESTIMATED ANNUAL QUANTITY OF WASTE	MEA- SURE (enter code)	1. PROCESS CODES (enter)			S	2. PROCESS DESCRIPTION (if a code is not entered in D(1))
X-1	K054	900	P	T03	D80			
X-2	D002	400	P	T03	D80			
X-3	D001	100	P	T03	D80			
X-4	D002			T03	D80			included with above
1	D001	30	Т	T04				Treatment
2	D002	450	Т	T04				Treatment
3	D003	3	Т	T04				Treatment
4	D004	450	Т	T04				Treatment
5	D005	450	Т	T04				Treatment
6	D006	450	Т	T04				Treatment
7	D007	450	Т	T04				Treatment
8	D008	450	Т	T04				Treatment
9	D009	450	Т	T04				Treatment
10	D010	450	Т	T04				Treatment
11	D011	450	Т	T04				Treatment
12	D012	70	Т	T04				Treatment

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13	D013	70	т	T04		Treatment
14	D014	70	Т	T04		Treatment
15	D015	70	Т	T04		Treatment
16	D016	70	Т	T04	i	Treatment
17	D017	70	Т	T04		Treatment
18	WT01	450	Т	T04	i	Treatment
19	WT02	450	Т	T04	i	Treatment
20	WP01	70	Т	T04		Treatment
21	WP02	70	Т	T04		Treatment
22	F001	70	Т	T04		Treatment
23	F002	70	Т	T04		Treatment
24	F003	70	Т	T04		Treatment
25	F004	70		T04		Treatment
26	F005	70	T	T04		Treatment
27	F006	70	T	T04		Treatment
	F007	1200	<u>'</u> Т	T04		
28				<u></u>		Treatment
29	F008	1200		T04		Treatment
30	F009	1,200	T	T04		Treatment
31	K031	1,200	T	T04		Treatment
32	K035	1,200	T	T04		Treatment
33	K084	1,200	T	T04		Treatment
34	K101	1,200	Т	T04		Treatment
35	K102	1,200	Т	T04		Treatment
36	W001	30	Т	T04		Treatment
	annual quantity	will not exceed 700 T.				
37	U001	1,000	Р	T04		Treatment
38	U002		↓ ↓	\		Ψ
39	U003			₩		↓
40	U004			₩		↓
41	U005		\	_ ↓		↓
42	U006		\	\		↓
43	U007		\	\		Ψ
44	U008		\	4		₩
45	U009		Ψ	Ψ		₩
46	U010		→	Ψ		Ψ
47	U011		₩	Ψ		↓
48	U012		₩	4		↓
49	U013		₩	Ψ		↓
50	U014		₩	4		↓
51	U015		Ψ	V		V
52	U016		Ψ	Ψ		₩
53	U017		Ψ	V		V
54	U018		<u> </u>	V		V
55	U019		<u> </u>	4		Ψ
56	U020		<u> </u>	4		Ψ
57	U021		V	→		V
58	U022		V	→		V
59	U023		<u> </u>	↓ ↓		·
60	U023		\ \ \ \	↓		↓ ↓
61	U024		\ \ \ \ \	V		↓ ↓
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62	U026			ال ا		
_	U026 U027 U028		\ \ \ \ \	↓		\ \ \

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65	U029		\downarrow	↓	↓	
66	U030		V	₩	↓	
67	U031		V	Ψ	V	
68	U032		V	→	V	
69	U033		Ψ	Ψ	V	
70	U034		Ψ	Ψ	V	
71	U035		V	Ψ	V	
72	U036		V	Ψ	·	
73	U037		V	Ψ	·	
74	U038		V	→	V	
75	U039		V	Ψ	V	
76	U040		V	→	V	
77	U041		V	Ψ	·	
78	U042		V	Ψ		
79	U043		V	→	Ψ	
80	U044		V		V	
81	U045		V	<u> </u>	Ψ	
82	U046		V	<u> </u>	Ψ	
83	U047		V	<u> </u>	Ψ	
84	U048		V	+	Ψ	
85	U049		V	+	Ψ	
86	U050		V	+	₩	
87	U051		V	+	Ψ	
88	U052		V	+	Ψ	
89	U053		V	V	Ψ	
90	U054		V	V	Ψ	
91	U055		Ψ	V	Ψ	
92	U056		V	V	↓	
93	U057		V		₩	
94	U058		V	+	Ψ	
95	U059		V	V	Ψ	
96	U060		V	V	Ψ	
97	U061		V	V	Ψ	
98	U062		V	+	Ψ	
99	U063		V	<u> </u>	Ψ	
100	U064		V	+	Ψ	
101	U065		V	+	Ψ	
102	U066		V	+	Ψ	
103	U067		V	<u> </u>	Ψ	
104	U068		V	V	Ψ	
105	U069		V	+	Ψ	
106	U070		V	V	Ψ	
107	U071		↓	↓	· •	
108	U072		V	V	↓	
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110	U074	<u> </u>	\	V	· •	
111	U075	<u>, </u>	\	V	· •	
112	U076		→		↓	
113	U077		→	V	V	
114	U077		→	V	V	
115	U079		↓	V	V	
116	U080		↓	V	V	
117	U080		↓	↓	V	
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118	U082	\downarrow	↓			↓
119	U083	V	V			Ψ
120	U084	Ψ	Ψ			↓
121	U085	V	4			↓
122	U086	\	Ψ			↓
123	U087	V	→			Ψ
124	U088	V	Ψ			↓
125	U089	V	₩			↓
126	U090	V	₩			↓
127	U091	\	Ψ			↓
128	U092	V	Ψ			↓
129	U093	V	₩			↓
130	U094	\	Ψ			↓
131	U095	\	Ψ			↓
132	U096	V	Ψ			↓
133	U097	Ψ	Ψ			V
134	U098	Ψ	Ψ			V
135	U099	Ψ	Ψ			V
136	U100	Ψ	Ψ			V
137	U101	V	Ψ			\
138	U102	V	Ψ			\
139	U103	V	Ψ			\
140	U104	Ψ	Ψ			V
141	U105	V	Ψ			Ψ
142	U106	V	Ψ			Ψ
143	U107	V	Ψ			V
144	U108	V	Ψ			\
145	U109	V	Ψ			Ψ
146	U110	V	Ψ			V
147	U111	V	Ψ			\
148	U112	V	Ψ			\
149	U113	V	Ψ			,
150	U114	V	Ψ			\
151	U115	V	Ψ			\
152	U116	Ψ	Ψ			V
153	U117	V	V			V
154	U118	Ψ	Ψ			V
155	U119	Ψ	Ψ			V
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158	U122	Ψ	Ψ			V
159	U123	V	V			\
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161	U125	V	V	ĺ		V
162	U126	V	V	ĺ		V
163	U127	V	V			\
164	U128	V	V			V
165	U129	V	V		ĺ	V
166	U130	V	V			V
167	U131	V	V		ĺ	V
168	U132	V	V		ĺ	V
169	U133	V	V		1	Ψ
170	U134	V	V			V
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188 U152 V V V	
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199 U163 V V	
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210 U174 V V	
211 U175 V V	
212 U176 V	
213 U177 V V	
214 U178	
215 U179 V V	
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219 U183 V V	
220 U184 V V	
221 U185 V V	
222 U186	
223 U187 V V	

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224	U188		\downarrow	₩			↓ ↓	
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228	U192		→	V			V	
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_			↓	↓				
231	U195						<u>'</u>	
232	U196		<u> </u>	↓			Ψ	
233	U197		<u> </u>	↓			Ψ	
234	U198		V	V			<u> </u>	
235	U199		V	V			Ψ	
236	U200		→	\			Ψ	
237	U201		Ψ	. ↓			Ψ	
238	U202		↓	\			↓	
239	U203		V	\			↓	
240	U204		V	4			↓	
241	U205		Ψ	Ψ			↓	
242	U206		→	4			Ψ	
243	U207		→	4			↓	
244	U208		→	V			V	
245	U209		→	V		ĺ	V	
246	U210		→	↓			V	
247	U211		→	V			↓	
248	U212		→	V			↓	
249	U213		→	V			↓	
250	U214		→	V			↓	
251	U215		→	V			V	
252	U216		→	V			↓	
253	U217		→	V			↓	
254	U218		→	V			↓	
255	U219		→	V			V	
256	U220		V	V			V	
257	U221		V	V			V	
258	U222		-	↓			<u> </u>	
259	U223		↓	↓				
260	U224		↓	↓			↓	
261	U225		↓	↓			<u> </u>	
262	U225 U226		↓	↓		1	*	
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263	U227		→	↓				
264	U228		→	↓		<u> </u>	Ψ ↓	
265	U229					<u> </u>		
266	U230		<u> </u>	V			Ψ	
267	U231		<u> </u>	↓		1	Ψ	
268	U232		<u> </u>	↓			Ψ	
269	U233		V	↓		<u> </u>	Ψ	
270	U234		↓	↓			Ψ	
271	U235		↓	↓			Ψ	
272	U236		V	V			Ψ	
273	U237		V	V			<u> </u>	
274	U238		V	V			↓	
275	U239		Ψ	. ↓			Ψ	
276	U240		V	V			Ψ	
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277	U241		↓	↓		ullet
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279	U243	,	₩	↓		↓
280	U244		Ψ	Ψ	ĺ	↓
281	U245		<u> </u>	\ \	ĺ	↓
282	U246		<u> </u>	\ \	ĺ	↓
283	U247		\ \		ĺ	↓
284	P001	1,000	Р	T04	ĺ	Treatment
285	P002		Ψ	Ψ	ĺ	↓
286	P003		↓	Ψ	ĺ	₩
287	P004		↓	Ψ	ĺ	↓
288	P005		↓	↓	ĺ	↓
289	P006		<u> </u>			↓
290	P007		<u> </u>	V		↓
291	P008		<u> </u>	+		
292	P009		<u> </u>	V		
293	P010		1	V		
294	P011		↓	V		
295	P012		V	V	J	→
296	P013		↓	V		· •
297	P013		↓ ↓	V	<u> </u>	→
298	P014		↓ ↓	V	<u> </u>	→
299	P016		↓ ↓	V	<u> </u>	→
	P017		\ \ \	V		<u> </u>
300			\ \ \ \	↓ ↓		→
301	P018		\ \ \ \ \			→
302	P019	<u> </u>	\ \ \ \ \			→
303	P020		\ \ \ \			↓
304	P021		\ \ \ \ \	V		↓
305	P022		\ \ \ \ \	V		↓
306	P023	<u> </u>	\ \ \ \ \			→
307	P024]	V
308	P025		<u> </u>	↓		
309	P026		<u> </u>	V]	<u> </u>
310	P027		<u> </u>	V]	<u>↓</u>
311	P028		<u> </u>	V		
312	P029		↓	↓		<u> </u>
313	P030		↓	↓		<u> </u>
314	P031		<u> </u>	↓		<u> </u>
315	P032		↓	V		<u> </u>
316	P033		<u> </u>	V		<u> </u>
317	P034		↓	↓		<u> </u>
318	P035		<u> </u>	V		<u> </u>
319	P036		↓	↓		<u> </u>
320	P037		↓	↓		<u> </u>
321	P038		<u> </u>	↓		<u> </u>
322	P039		↓	↓		<u> </u>
323	P040		↓ ↓	₩		<u> </u>
324	P041		↓	↓		<u> </u>
325	P042		↓	₩		<u> </u>
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328	P045		4	₩		↓
329	P046		4	₩		\downarrow

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330	P047		\downarrow	↓			↓
331	P048		V	V			\
332	P049		V	4			↓
333	P050		Ψ	Ψ			V
334	P051		Ψ	Ψ			V
335	P052		Ψ	Ψ			V
336	P053		V	4			V
337	P054		V	4			V
338	P055		V	4			V
339	P056		V	Ψ			Ψ
340	P057		Ψ	4			V
341	P058		V	V		1	\
342	P059		V	V		1	<u> </u>
343	P060		V	4			\
344	P061		V	→			V
345	P062		V	↓			↓
346	P063		-			1	· · · · · · · · · · · · · · · · · · ·
347	P064		V	_ ·		1	· · · · · · · · · · · · · · · · · · ·
348	P065		↓	↓		1	<u> </u>
349	P066		V	↓			,
350	P066		↓	↓			↓ ↓
351	P067		V	↓			↓ ↓
352	P069		↓	↓			↓ ↓
_			→	↓			↓
353	P070		↓	↓			↓
354	P071		↓	↓			↓
355	P072		↓	↓			↓
356	P073		→	↓			\
357	P074		→				↓
358	P075		→				↓
359	P076		↓				↓
360	P077						\ \ \ \
361	P078		<u> </u>			1	
362	P079		<u> </u>	↓			Ψ
363	P080		<u> </u>	↓			ψ
364	P081		<u> </u>	↓			<u> </u>
365	P082		<u>+</u>	V		1	<u> </u>
366	P083		<u>+</u>	V		1	<u> </u>
367	P084		V	V		1	<u> </u>
368	P085		<u> </u>	↓			<u> </u>
369	P086		↓	↓			<u> </u>
370	P087		V	₩			\
371	P088		V	₩ .			\
372	P089		V	\			↓
373	P090		Ψ	\			↓
374	P091		Ψ	\			↓
375	P092		Ψ	\			↓
376	P093		V	Ψ			↓
377	P094		V	4			Ψ
378	P095		V	4			Ψ
379	P096		V	Ψ			Ψ
380	P097		V	4			₩
381	P098		V	4			↓
382	P099		V	Ψ			↓

383	P100	. ↓	4	↓
384	P101	. ↓	4	↓
385	P102	4	\	Ψ
386	P103	Ψ	4	Ψ
387	P104	Ψ	4	Ψ
388	P105	Ψ	4	Ψ
389	P106	₩	4	Ψ
390	P107	Ψ	4	Ψ
391	P108	Ψ	4	Ψ
392	P109	Ψ	4	Ψ
393	P110	₩	4	Ψ
394	P111	→	4	Ψ
395	P112	Ψ	4	Ψ
396	P113	Ψ	4	Ψ
397	P114	₩	4	Ψ
398	P115	Ψ	4	Ψ
399	P116	Ψ	4	Ψ
400	P117	Ψ	4	Ψ
401	P118	Ψ	4	Ψ
402	P119	Ψ	4	↓
403	P120	Ψ	4	↓
404	P121	Ψ	4	↓
405	P122	Ψ	4	Ψ
406	P123	→	4	Ψ

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The RMW and hazardous waste to be handled in thermal treatment test facilities include listed wastes, wastes from nonspecific sources, characteristic wastes and state -only wastes.

Thremal treatment test facilities are currently tested in the engineering development laboratory (EDL), EDL high bay and hot cell complex of the 324 Building, the ISV test site west of the 300 Area (see attached drawing), the 116-B-6-1 crib, and other selected laboratories in the 324, 325, and 331 Buildings. These technologies may be used in other facilities and at RMW/hazardous waste remedial action locations.

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility (see instructions for more detail).

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs (arial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

LATITUDE (degrees,	, minutes, & seconds)	LONGITUDE (degrees, minutes, & seconds)					

VIII. FACILITY OWNER				
A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below. B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:				
1. NAME OF FACILITY'S LEGAL OWNER			2. PHONE NO. (area code & no.)	
3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE	
IX. OWNER CERTIFICATION				
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.				
NAME (print or type)	SIGNATURE	DATE SIGNED		
Michael J. Lawrence, Manager U.S. DOE, Richland Operations	Michael J. Lawrence	05/19/1988		
X. OPERATOR CERTIFICATION				
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.				
NAME (print or type)	SIGNATURE	DATE SIGN	NED	
SEE ATTACHMENT				

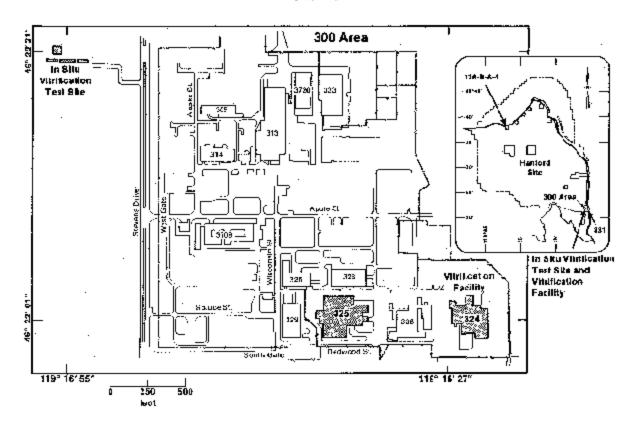
X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Michael J. Lawrence	5/19/88
Owner/Operator	Date
Michael J. Lawrence, Manager	
Department of Energy,	
Richland Operations Office	
William R. Wiley	5/19/88
Co-Operator	Date
William R. Wiley, Director	
Pacific Northwest Laboratory	

Thermal Treatment Test Facilities

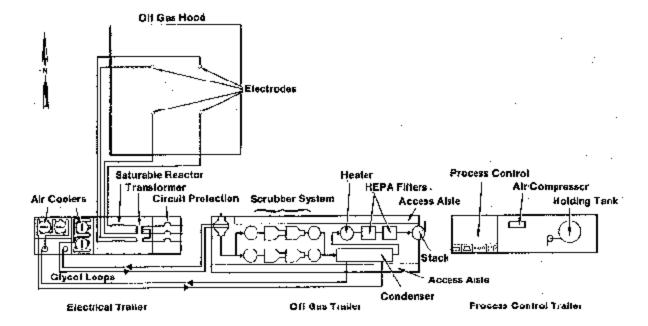
Site Plan



78803-054.2

Thermal Treatment Test Facilities

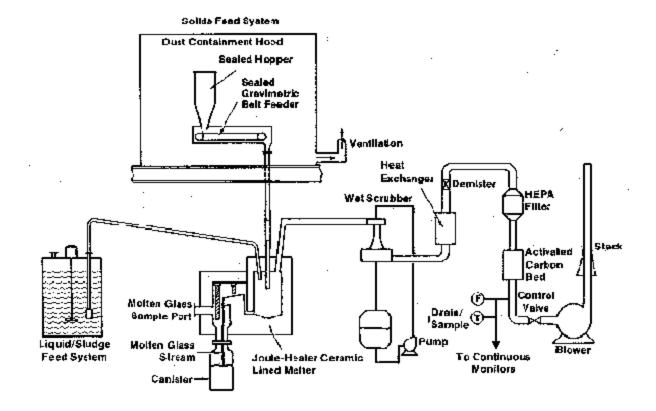
In Situ Vitrification Process Trailer Schematic



78803-054.4

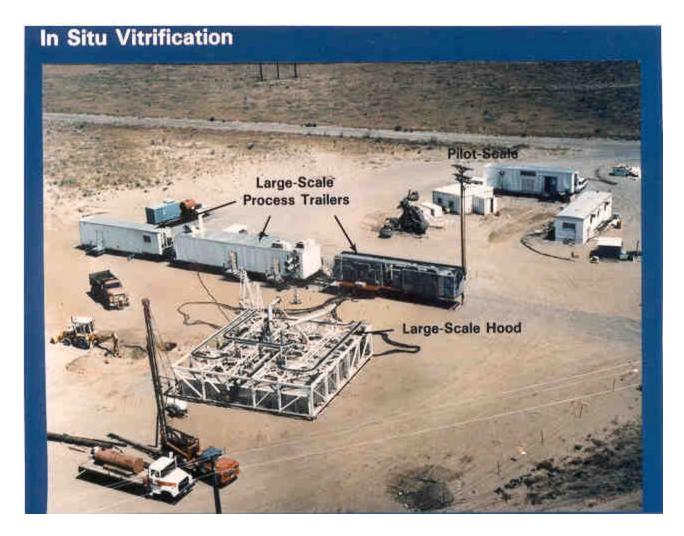
Thermal Treatment Test Facilities

Flow Diagram for Vitrification Process



78803-054.5

THERMAL TREATMENT TEST FACILITIES - IN SITU VITRIFICATION



46°22'21" 119°16'55"

8600495-1CN (PHOTO TAKEN 1986)

THERMAL TREATMENT TEST FACILITIES - WASTE VITRIFICATION



46°22'01" 119°16'27"

8605893-4CN (PHOTO TAKEN 1986)